

REMARKS

Claims 1-17 were pending in the application. Claims 9 and 17 have been cancelled. Claims 1, 7, 10-12 and 16 have been amended. Claims 18-25 have been added. Claims 1-8, 10-16 and 18-25 are currently pending in the application.

Objection to the Claims:

Applicant has amended claim 1 to change “present in a local” to “present in a local database” as suggested by the Examiner.

Applicant respectfully disagrees with the Examiner’s suggestion to replace the limitation of “computer file” with the limitation of “specific file” in claim 1, line 9 and in claim 10, lines 7, 11, and 13. Applicant submits that the limitation “computer file” has as its antecedent the limitation of “each computer file on said target computer which has been previously backed up” in both of claims 1 and 10. Accordingly, Applicant respectfully submits that the claims are clear as presented herein.

35 U.S.C. § 103 Rejections:

Claims 1-17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Whiting, U.S. Patent Application Publication 2002/0107877, in view of Witt, U.S. Patent 6,971,018. Applicant respectfully traverses this rejection.

The prior art references, taken singly or in combination, fail to teach or suggest all of the limitations of the independent claims. Whiting teaches a system for backing up files from disk volumes on multiple nodes of a computer network to a common random-access backup storage means. As part of the backup process taught by Whiting, duplicate files (or portions of files) may be identified across nodes, so that only a single copy of the contents of the duplicate files (or portions thereof) is stored in the backup storage means. For each backup operation after the initial backup on a particular volume, only those files which have changed since the previous backup are actually read from the volume and stored on the backup storage means. In addition,

differences between a file and its version in the previous backup may be computed so that only the changes to the file need to be written on the backup storage means. To view or restore files from a backup, a user may mount the backup set as a disk volume with a directory structure identical to that of the entire original disk volume at the time of the backup.

Witt teaches a method and system that protects selected system and other files, by preventing changes to those files. In an asynchronous alternative of Witt, the change is prevented by copying back the original file when a protected file is changed, as known via an asynchronous notification. In an alternative synchronous embodiment of Witt, the change to the file is prevented from occurring. In the asynchronous notification alternative, a directory change notification notifies a file protection service whenever a file that has possibly changed is closed, providing the file identity as part of the notification. The file protection service determines from the file identity whether the file has been deemed protected. If protected, the file protection service prevents any actual change by verifying whether the protected file changed, such as by analyzing the file's contents against known valid contents. If not valid, the file protection service restores a saved copy that is itself verified.

In contrast, Applicant's independent claim 1 recites, in pertinent part:

“if said specific hashing key is not present in said local database, backing up said specific file by performing the steps of:
creating a backup file which is a duplicate of said specific file;
renaming said backup file to said specific hashing key” (Emphasis added).

Independent claim 10 recites a similar combination of features. Independent claim 7 recites, in pertinent part:

“using said specific hashing key to retrieve a backup file from a central storage server, said backup file being a duplicate of said specific file, wherein the name under which said

backup file has been stored in said central storage server depends on said hashing key”
(Emphasis added).

Neither Whiting nor Witt, whether taken singly or in combination, teach or suggest “renaming said backup file to said specific hashing key” in combination with the other features, as recited in claim 1 or similarly recited in claim 10. Furthermore, neither Whiting nor Witt, taken singly or in combination, teach or suggest a backup file “wherein the name under which said backup file has been stored in said central storage server depends on said hashing key” in combination with the other features, as recited in claim 7.

In the office action, the Examiner contends (on page 4, item B.) that Whiting teaches renaming said backup file to said specific hashing key in paragraph [0083], which states:

“[0083] In the preferred embodiment, entries to be added to the global directory database file 145 are extracted from the backup data files (e.g., 144) by the Agent process 108 as part of the migration of the backup data files from the \BACKUP\USER path (e.g., 125) to the \BACKUP\SYSTEM path (e.g., 129). The Agent 108 first verifies the CRC covering the <fileInfoData> entries 436 in the backup data file to guarantee that no corrupted entries are added to the global directory database. A new global database file 145 may then be created, consisting of the old entries merged with the new entries. In the preferred embodiment, the new database file is initially created by the Agent 108 under a temporary name so that backup processes may continue to use the current database file. Once creation of the new file is completed, its name is changed to a valid global directory database file name which will then be accessed by subsequent backup operations. In the preferred embodiment, the name of global directory database files have the form GDnnnnnn.GDD, where nnnnnn is a number which is incremented each time a new global directory database file is added. For example, the first file would be GD000001.GDD, the second would be GD000002.GDD, etc. Only a small number (typically 1-4) of the most recent versions of such files is retained; older versions are deleted once they are no longer in use. Thus, for example, after some time

there might be two files GD000138.GDD and GD000139.GDD stored in the \BACKUP\SYSTEM\GLOBAL directory 127; each time a backup operation begins, the backup process will select the "latest" version of the global directory database file 145 available (GD000139.GDD in this example)." (Emphasis added).

From the above citation, it is clear that the form of the names used for each backup file in the system taught by Whiting is not the file's specific hashing key. Furthermore, it is clear from the above citation that the names used for each backup file in the system taught by Whiting are not dependent on a hashing key. Instead, the file naming convention taught by Whitt includes a number that is incremented each time a new global directory database file is added. Whiting provides no other teaching or suggestion that would result in naming files in accordance with the combinations of features recited in any of claims 1, 7, or 10. Witt provides no teaching or suggestion that would lead one of ordinary skill in the art to modify Whiting in order to obtain the combinations of features recited in any of claims 1, 7, or 10.

For at least the reasons stated above, Applicant submits that a case of obviousness has not been established. Accordingly, removal of the 35 U.S.C. § 103(a) rejection is respectfully requested.

Patentability of the Added Claims:

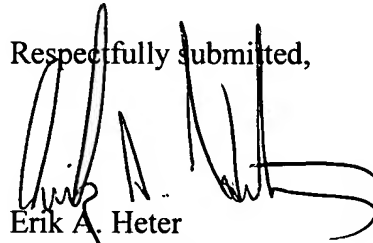
The present amendment adds claims 18-25. Applicant submits that no new matter has been added, and that the claims are fully supported by the specification as filed (e.g., Fig. 3, 402; page 11, line 10 to page 12, line 6). Applicant further submits that the newly added claims recite combinations of features not taught or suggested by the prior art, and thus their allowance is respectfully requested.

CONCLUSION:

Applicant submits the application is in condition for allowance, and an early notice to that effect is requested. If a phone interview would speed allowance of any pending claims, such is requested at the Examiner's convenience.

The Commissioner is authorized to charge any fees which may be required, or credit any overpayment, to Meyertons, Hood, Kivlin, Kowert & Goetzel, P.C. Deposit Account No. 501505\5760-44806.

Respectfully submitted,



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